

c.) Remarks:

The pending claims are 1-7 with Claims 1-3 and 7 being independent.

Claims 1-6 have been amended to better define the intended invention. Support for the amended claims can be found, inter alia, on page 8, lines 11-25, on page 9, line 20 to page 10, line 7 in the specification and Figs. 5 and 7. Support for new Claim 7 can be found, inter alia, in Fig. 7. Amended Claim 6 is supported on page 9, lines 14-19 in the specification. Reconsideration of the claims is expressly requested.

Claims 1-6 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Jindai et al, U.S. 6,582,268 (Jindai). Applicants respectfully traverse the grounds of rejection.

Prior to addressing the grounds of rejection, Applicants wish to briefly review certain key features and advantages of the present claimed invention.

It is a feature of the present invention that groove 61 is formed in the support 9 over which conductors (units) are formed (see page 8, lines 12-15 in the specification). In particular, groove 61 is formed in a portion of support 9 that corresponds to the periphery of the region where the units are formed, in order to prevent temperature distribution in this region (see page 10, lines 20-25, in the specification and Figs. 7 and 8). Further, groove 61 is formed in, for example, electrostatic chuck 8 which is in contact with substrate 1 over which conductors are formed in region 2. Moreover, Groove 61 preferably has opposed walls. In particular, groove 61 is preferably formed along the periphery (or peripheral portion) of the region where conductors are formed (see page 8, lines 20-22 in the specification) and between opposed walls of the groove. Further, the inner end of

groove 61 can be positioned more inward than the periphery of the region where units are formed (see page 9, lines 7-9, in the specification). The outer end of groove 61 can be positioned more outward than the periphery of the region where the units are formed (see page 9, lines 14-19, in the specification). Therefore, in this embodiment the periphery is spatially located between the inner and outer ends of the groove.

Thus, the presence of the groove along the conductor periphery results in a more uniform heat distribution. The groove allows heat generated in the conductor and substrate to be better controlled to suppress temperature distribution at the periphery by suppressing dissipation of heat at the periphery. Excess heat is removed via the gap to keep the surface temperature of the substrate relatively constant (page 18, lines 20-25 and page 19, lines 26 to page 20, line 5 in the specification).

Instant amended Claims 1-3 include, inter alia, a groove wherein a periphery of a region where the conductor or a plurality of conductors formed on the substrate is arranged along the groove. The Examiner contends that Jindai allegedly teaches in Figure 11 a rectangular groove that is formed along a periphery of a region where the conductor is formed. However, Jindai is silent with respect to the spatial relationship between a periphery of the electron source 210 and the groove. In particular, nothing in Jindai teaches or suggests a groove formed on the support so that a periphery of a region where the conductor is formed on the substrate is arranged along the groove. Jindai merely teaches that the inside of a groove 221 is formed in the surface of the electrostatic chuck 216 (col. 16, lines 53-54). The lead line to groove 221 is inward of the periphery of source 210. This suggests the groove doesn't extend to the periphery, if at all.

Jindai does not teach or suggest that the spatial relationship between the periphery and the groove, as employed by the instant invention. Jindai does not teach or suggest that the groove is formed in a portion of the support that is along the periphery of the regions where units are formed, thereby better suppressing dissipation of heat at the periphery of the region and resulting in a more uniform temperature distribution along the regions on which the conductor is arranged (see page 10, line 20 to page 11, line 4 in the specification).

The term, “along” is defined as, “in the course of.” See Webster’s Ninth New Collegiate Dictionary at 73 (1991). The instant invention simply discloses that groove 61 is in the course of, or in proximity to, the periphery sufficient to permit heat dissipation. In contrast, Jindai merely discloses, without anything more, that a groove forms in the surface layer of the electrostatic chuck (see col. 16, lines 52-55). In Jindai the groove can be substantially displaced from the periphery.

In addition, Fig. 11 in Jindai does not disclose any configuration of the groove. When the reference does not disclose that the drawings are to scale and is silent as to dimensions, then arguments based on these drawings are not persuasive. See MPEP § 2125. In addition, Jindai fails to disclose that the groove is rectangular. See MPEP § 2125. Finally, Jindai fails to disclose that the periphery is spaced between opposed ends of the groove (Claim 7). Clearly, the drawings in Jindai fail to show, at all, that the periphery is spaced between the walls of the groove to further enhance heat dissipation.

Accordingly, it is respectfully requested that the claims be allowed and that the case be passed to issue.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

  
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